

## A Water Temple at Bir Abu Safa (Eastern Desert)

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### Background and Location

L. M. A. Linant de Bellefonds briefly noted a temple cut into a mountainside that he saw in March 1832 in the southern part of Egypt's Eastern Desert (figs. 1–3).<sup>1</sup> On his map of the same region, he shows the temple (“Eau et Temple”) at the confluence of Wadis Na’am and Hodein, nearly 20 km east of its actual location at Bir Abu Safa.<sup>2</sup> The temple is farther up Wadi Hodein, where Bellefonds’ map marks only a well or spring (“Eau”). When the authors saw no temple, or even a water source, where Bellefonds’ map indicated these would be found, inquiries made of local Bisharii Bedouin led them to the correct site. When the authors compared the actual appearance of the temple with Bellefonds’ drawing (fig. 3), it was clear that the two were one and the same monument.

Other early desert travelers noted the “temple,” but had little to add to Bellefonds’ description. These include Col. Purdy’s observations based on a late nineteenth century trip he made to the area.<sup>3</sup> Later, G. Darresy cited Purdy and provided a sketch map of the area.<sup>4</sup> E. A. Floyer also noted the temple as “a carved portal with an obliterated Greek inscription.”<sup>5</sup> Subsequently, W. F. Hume also described the temple.<sup>6</sup>

The temple is carved into the lower southern face of a large sandstone mountain, which forms the northern side of a narrow *wadi* that is a branch of Wadi Hodein, and is located at 23° 18.08’ N/34° 47.68’ E. Bellefonds believed that the temple was a stop for hunters in the region,<sup>7</sup> but he does not elaborate. The Ptolemaic-early Roman fort at Abraç is about 13 km due north in a straight line, and about 22 km via Wadis Hodein and Abraç. Along the route between Abraç and Bir Abu Safa are remains of graves, cairns, rock graffiti (including some in Arabic) and Roman-period pottery (especially at 23° 18.45’ N/34° 48.94’ E) that attest the presence of a long-used track between Abraç and Bir Abu Safa.

<sup>1</sup> L. M. A. Linant de Bellefonds, *L’Etbaye, pays habité par les Arabes Bichariéh. Géographie, ethnologie, mines d’or* (Paris, 1868), p. 264 and pl. 13. Hodein means two basins, but no ancient man-made structures other than the temple façade are evident; cf. M. Kurtz and P. Linant de Bellefonds, “A la découverte des mines d’or du désert nubien: L. M. A. de Bellefonds en Etbaye, 1831–1832,” in J. Starkey and O. El-Daly, eds., *Desert Travellers from Herodotus to T. E. Lawrence* (Durham, 2000), pp. 173–74 (fig. 15).

<sup>2</sup> Bellefonds (n. 1 above), map. For a description of Wadi Hodein see J. Ball, *The Geography and Geology of South-Eastern Egypt* (Cairo, 1912), pp. 115–16.

<sup>3</sup> Col. Purdy, “Une Reconnaissance entre Bérénice et Berber, Expedition Purdy-Colston-Rapport du Colonel Purdy,” *Bulletin de la Société khédiviale de Géographie*—2nd ser., no. 8 (1886), p. 433 and map.

<sup>4</sup> G. Darresy, “Bérénice et el Abraç,” *ASAE* 22 (1922), pp. 176–77, 181 (fig. 5) for sketch map.

<sup>5</sup> E. A. Floyer, *Étude sur le Nord-Etbai entre le Nil et la Mer Rouge* (Cairo, 1893), p. 411.

<sup>6</sup> W. F. Hume, *Geology of Egypt. Volume I. The Surface Features of Egypt, their Determining Causes and Relation to Geological Structure* (Cairo, 1925), p. 135.

<sup>7</sup> Bellefonds (n. 1 above), p. 264.

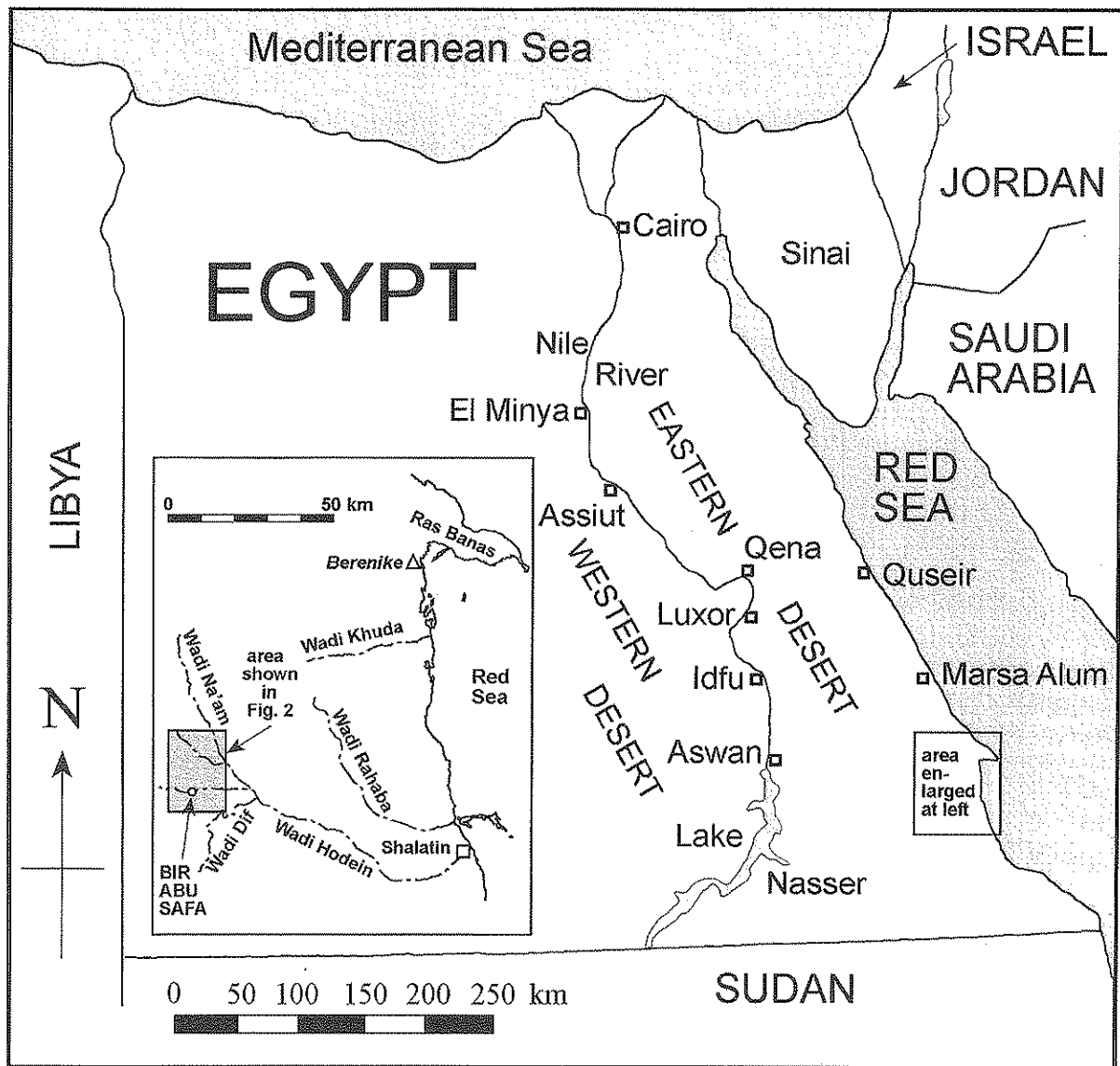


Fig. 1. Location map for Bir Abu Safa. Drawn by J. A. Harrell.

Abraq itself preserves a fort where surveys conducted in 1994 and 1995 collected Ptolemaic and perhaps early Roman pottery.<sup>8</sup> Also noted in a *wadi* with a long and still used well, about 500 m northeast of the fort, were numerous petroglyphs of different periods and late Roman pottery.<sup>9</sup>

<sup>8</sup> S. E. Sidebotham, "Survey of the Hinterland," in S. E. Sidebotham and W. Z. Wendrich, eds., *Berenike 1994. Preliminary Report of the 1994 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert* (Leiden, 1995), pp. 99-100 with bibliography; S. E. Sidebotham and R. E. Zitterkopf, "Survey of the Hinterland," in S. E. Sidebotham and W. Z. Wendrich, eds., *Berenike 1995. Preliminary Report of the 1995 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert* (Leiden, 1996), pp. 372-77.

<sup>9</sup> Sidebotham (1995) (n. 8 above), p. 101; Sidebotham and Zitterkopf (1996) (n. 8 above), pp. 372 and 376 (figs. 21-20).

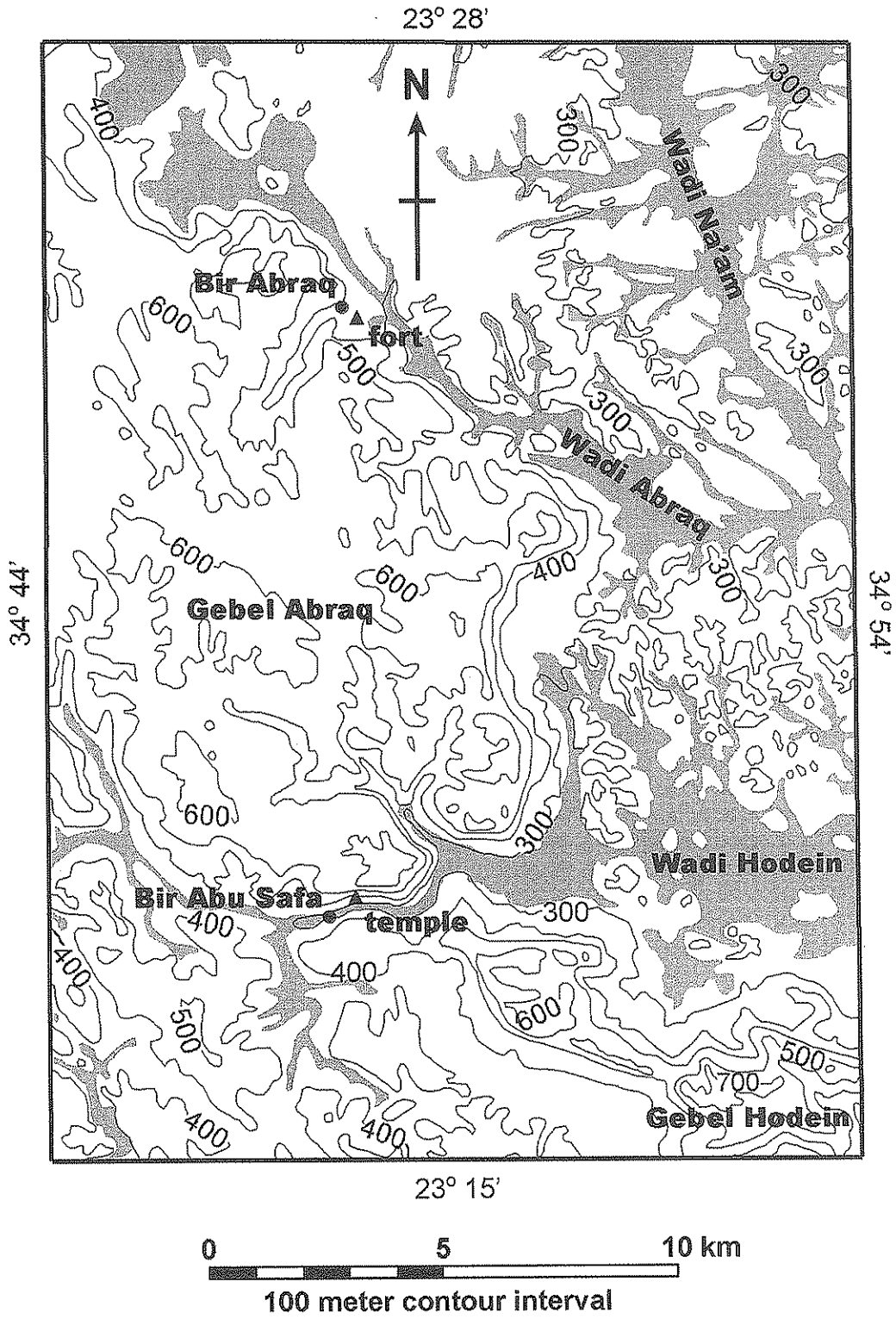


Fig. 2. Map of the Bir Abu Safa area. Drawn by J. A. Harrell.

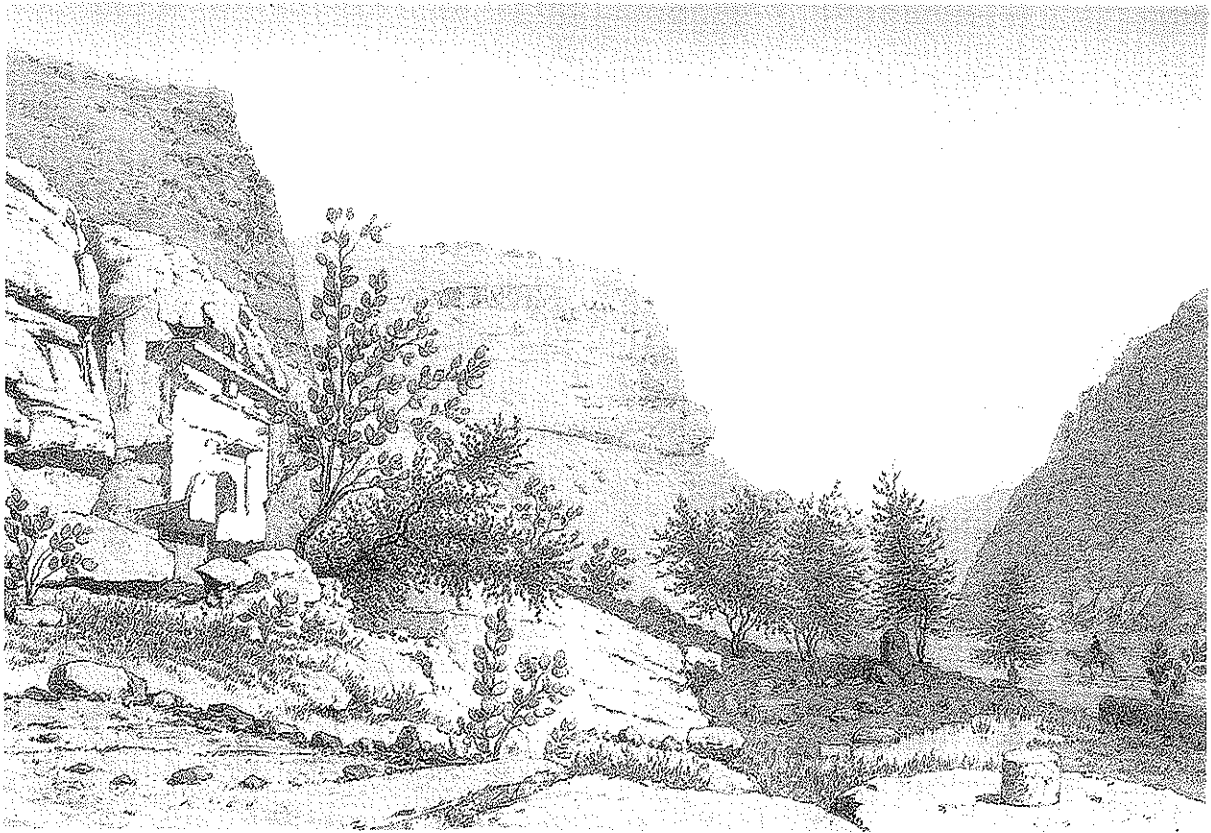


Fig. 3. View of "temple" at Bir Abu Safa. Drawn by L. M. A. Linant de Bellefonds, from his book *L'Etbye, pays habité par les Arabes Bicharieh. Géographie, ethnologie, mines d'or* (Paris, 1868): plate 13.

Among the petroglyphs is a nicely drawn graffito of an elephant<sup>10</sup> as well as a dipinto in red paint showing an elephant with a rider, perhaps a *mahout*.<sup>11</sup> These images would suggest the occasional passing of elephants along this way. Groups who transported elephants for use in the Ptolemaic army, the zenith of which was during the reigns of Ptolemy II Philadelphus (282–246 B.C.), Ptolemy III Euergetes (246–221 B.C.) and Ptolemy IV Philopator (221–205 B.C.),<sup>12</sup> arrived by sea at Berenike from more southerly Red Sea ports in Sudan and Eritrea, and would have crossed the desert with their charges to ports on the Nile. While most evidence points to the Berenike-Apollinopolis Magna (Edfu) road as the main artery for movement of the pachyderms, alternative routes such as one via Abraq and Bir Abu Safa may also have been used. Though no survey has established conclusively the

<sup>10</sup> Sidebotham and Zitterkopf (1996) (n. 8 above), p. 101; Sidebotham and Zitterkopf (1996) (n. 8 above), pp. 372 and 376 (figs. 21–20).

<sup>11</sup> Seen by Sidebotham and Mikhail in September 2002.

<sup>12</sup> Cf. H. H. Scullard, *The Elephant in the Greek and Roman World* (Ithaca, NY, 1974) 126–45; I. Hofman, *Wege und Möglichkeiten eines indischen Einflusses auf die merottische Kultur* (Bonn, 1975), pp. 46–55, 98–111; L. Casson, "Ptolemy II and the Hunting of African Elephants," *TAPA* 123 (1993), pp. 247–60; S. M. Burstein, "Ivory and Ptolemaic Exploitation of the Red Sea: The Missing Factor," *Topoi* 6,2 (1996), pp. 799–807.

existence of a route from Berenike to the Nile near or at Aswan via Abraaq and Bir Abu Safa, Bisharii Bedouin informants report that a desert track leads generally west-southwest from Bir Abu Safa stopping at Bir al-Morraah, Bir al-Umrata, Bir Haymer and then reaches the Nile. The survey had no time to investigate this track, but if the Bedouin report is accurate, it suggests the presence of a Ptolemaic-Roman route from at least Abraaq, and more likely from Berenike via Abraaq, to the Nile somewhere near Aswan.

### Geology

Two geologic formations, the Umm Barmil and Timsah, comprise the bedrock exposed in the hills around Bir Abu Safa. These rock units belong to the Nubia Group (or "Sandstone") of Cretaceous age.<sup>13</sup> The temple is cut into the Umm Barmil Formation, which at this locality is a brown, goethite-cemented, occasionally pebbly (grains > 2 mm), medium- to very coarse-grained (0.25–2 mm) sandstone. This rock is both highly porous and permeable. The underlying Timsah Formation consists of fine-grained sandstone, siltstone and shale, and, due to its finer texture, is less permeable than the Umm Barmil. Rain falling on Gebel Abraaq infiltrates into the Umm Barmil and moves downward until it reaches the top of the Timsah Formation. As Hume<sup>14</sup> noted, the groundwater follows the dip-slope of a syncline, probably moving along the formational contact, to the *wadi* wall where it issues as a spring at the western end of the temple's façade. From there it flows down the hillside to form a shallow pool beneath the temple.

### Description

The structure is only the façade of a small temple with overall dimensions 5.10 m high × 4.60–4.63 m wide; there is no internal room (figs. 3–8). The large central opening or faux door below the top of the arch is up to 1.5 m high × 0.8 m wide and varies from 1.3 m to 0.65 m deep at the top and bottom, respectively. There are four square holes in the architrave/entablature, which average 0.32 m high × 0.32 m wide with depths of 0.18 m (at the top) to 0.25 m (at the bottom). Purdy, followed by Hume, believed these holes held a protective roof to shield the water from the sun's rays.<sup>15</sup> This, however, is not likely as the water pools some distance away and down hill from the temple façade. Possibly there was some type of roof or awning as Purdy and Hume suggested, but which protected visitors rather than the water. Shallow cuttings in the façade provide the impression that ashlar blocks were used to build it, but the entire structure is carved from the sandstone bedrock.

Portions of a Greek inscription survive above the faux door (fig. 9). Overall dimensions of the inscription are 0.32 m long (wide) × 0.25 m high. It is tempting to connect the inscription with the somewhat unclear statement in Bellefonds who remarked,

Enfin, il y a un très-petit tableau hiéroglyphique, qui ne pouvait être qu'une inscription fort courte, sur laquelle on distingue, entre autres caractères le nom de Ptolémée Evergète.<sup>16</sup>

<sup>13</sup> C. H. Squyres, E. Klitzsch, F. K. List, G. Pöhlmann, R. Handley, M. Hermina and B. Meissner, eds., *Geological Map of Egypt, 1:500,000—Bernice sheet (NF 36 NE)* (Cairo, 1987); M. Hermina, E. Klitzsch and F. K. List, *Stratigraphic Lexicon and Explanatory Notes to the Geological Map of Egypt, 1:500,000* (Cairo, 1989).

<sup>14</sup> Hume (n. 6 above), p. 135.

<sup>15</sup> Purdy (n. 3 above), p. 433; Hume (n. 6 above), p. 135.

<sup>16</sup> Bellefonds (n. 1 above), p. 264.

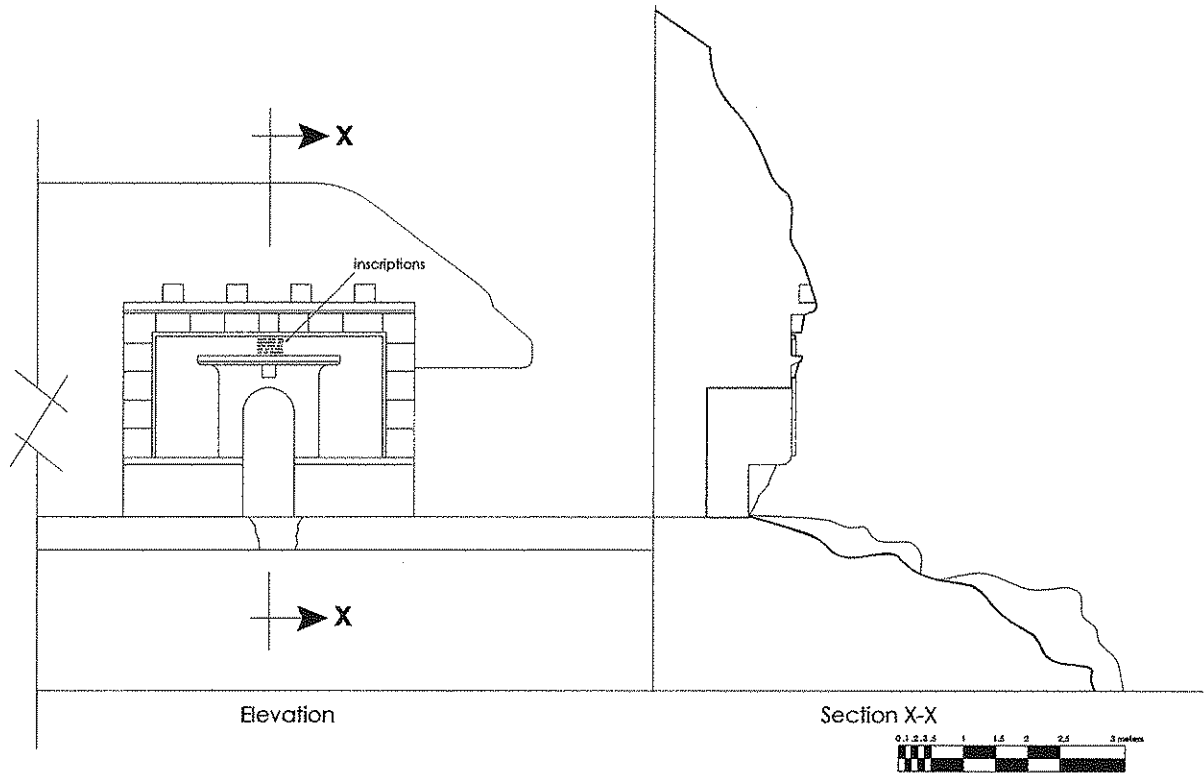


Fig. 4. Elevation and section of "temple" façade at Bir Abu Safa. Drawn by G. T. Mikhail.

Ptolemy III Euergetes (reigned 246–221 B.C.), rather than Ptolemy VIII Euergetes II (ruled 170–116 B.C.) is presumably intended. Unfortunately, Bellefonds does not provide a transcription, nor do any of the other travelers who published their visits. No hieroglyphs are visible today, and it is possible that in writing about his visit Bellefonds mistakenly referred to hieroglyphs instead of Greek. It is also possible, however, that his remarks compress notes that referred to a now-lost hieroglyphic inscription as well as the partly surviving Greek one.

In any case, it seems worth beginning from the question of whether the visible remains are compatible with Bellefonds' identification of the king responsible for the dedication as Ptolemy Euergetes. The inscription is today almost completely eroded, with only a few letters of each line visible in the area just above the center of the door frame. At the bottom is clearly visible the L-shaped sign for year, Greek  $\xi\tau\omicron\upsilon\varsigma$ , followed by the numeral 19,  $\iota\theta$ . Ptolemy III Euergetes did have a nineteenth year, which in the Egyptian calendar (most likely used here) ran from 19 October 229 to 18 October 228 B.C.<sup>17</sup> The traces after the year numeral look like a pi, after which there are faint traces compatible with the top apex of alpha, which would make the month Pachon or Pauni, both falling in the summer of 228 B.C.

It is impossible at present to determine the original left and right boundaries of the inscription. The overall width of the surface inside the outer framing of the temple is about 3.6 m, but the in-

<sup>17</sup> T. C. Skeat, *The Reigns of the Ptolemies*, 2nd ed. (Münchener Beiträge zur Papyrusforschung 39) (Munich, 1969), p. 12.

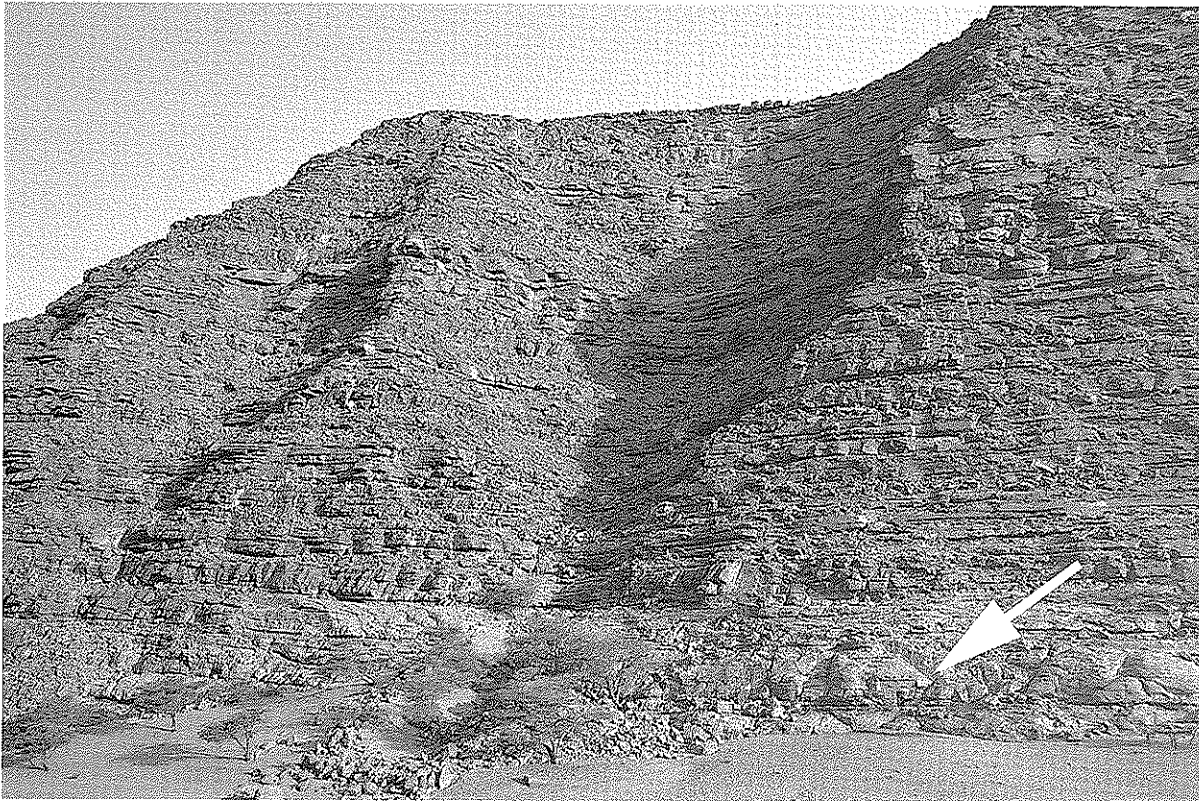


Fig. 5. View of sandstone mountain with temple designated by arrow, looking north. Photo by S. E. Sidebotham.

scription might well have occupied only the part of that space over the horizontal line framing the doorway itself. This was about 2.2 m wide. Although no exact measurements of letter width were taken, it appears that on average letters in line 1 occupied about 3 cm each, so that an inscription occupying only the space over the doorframe could have been approximately 73 letters to the line, one occupying the entire framed space about 117 letters to the line. These are obviously very rough approximations.

The shortest likely restoration of titulature recognizable as that of Ptolemy III would have been that found in *OGIS* 60: βασιλεὺς Πτολεμαῖος Πτολεμαίου καὶ Ἀρσινόης Θεῶν Ἀδελφῶν.<sup>18</sup> It is possible to read in line 1: ΝΟ.ΣΘΕ, followed by a large round letter (either omicron or omega), and the remains of another letter that looks like nu. That supports a reading and restoration of [Βασιλεὺς Πτολεμαῖος Πτολεμαίου καὶ Ἀρσι]νόης Θεῶν [Ἀδελφῶν]. The restoration of 35 letters would mean about 36–37 letters to the left of the midpoint on the door, which would be consistent with the shorter assumption described above, namely that the inscription occupied only the space over the top of the door lintel. The images of the inscription, taken from below at various angles, are not entirely satisfactory, and they particularly do not allow the confirmation of the eta needed for this

<sup>18</sup> W. Dittenberger, ed., *Orientalis Graeci Inscriptiones Selectae* (Berlin-Leipzig, 1903–5), no. 60.



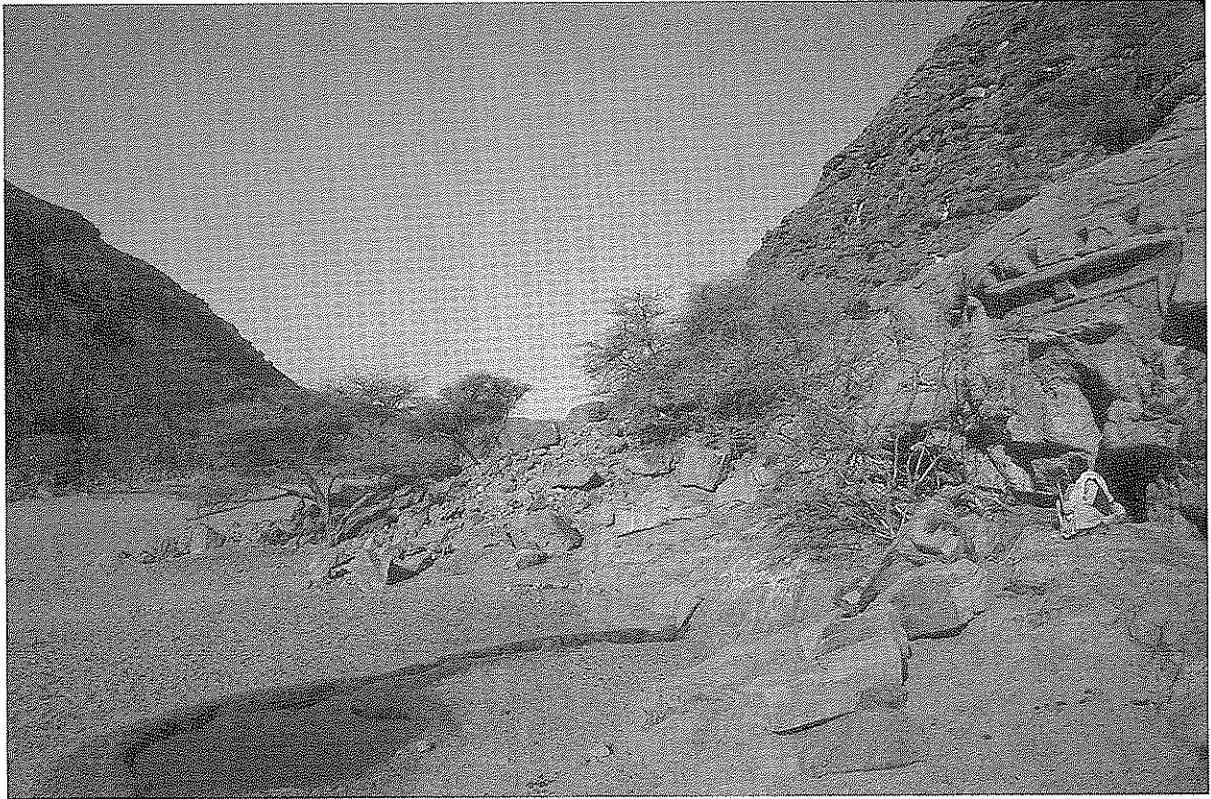


Fig. 6. View of pool and façade of "temple" at Bir Abu Safa, looking west-northwest. Photo by S. E. Sidebotham.

reading. Nonetheless, the reading of the remainder is sufficiently secure that it seems likely that this text is what was inscribed. Bellefond's report is, thus, consistent with what survives.

The other three lines are more difficult. Line 2 seems most likely to read TONANAA, with the first nu uncertain. Line 3 appears to be TOIΣIEPOIΣ, although it is possible that iota and sigma are instead the halves of the nu. Line 4 has barely any recognizable traces, including perhaps ON. These remains do not seem to us sufficient to support a restoration.

A search of the area around the temple recovered no associated datable artifacts or other ancient graffiti of any kind. Ababda and Bisharii Bedouin water their herds here today and at the modern *bir*, that appears on maps, about 100 m west of the "temple."

#### Parallels

While there are large rock-cut temples with interior rooms in the Eastern Desert, those of Seti I (XIX dynasty) at el-Kanaïs<sup>19</sup> and in Wadi Sikait (the latter associated with beryl mining operations that are at least Roman in date, if not earlier),<sup>20</sup> the authors know of no parallels in the Eastern Desert in function or design for the Bir Abu Safa temple façade, which seems to monumentalize a scarce water supply. The temple of Seti I at el-Kanaïs is near an ancient water source (a well on the

<sup>19</sup> In general see A. Bernand, *Le Paneion d'El-Kanaïs: les Inscriptions grecques* (Leiden, 1972).



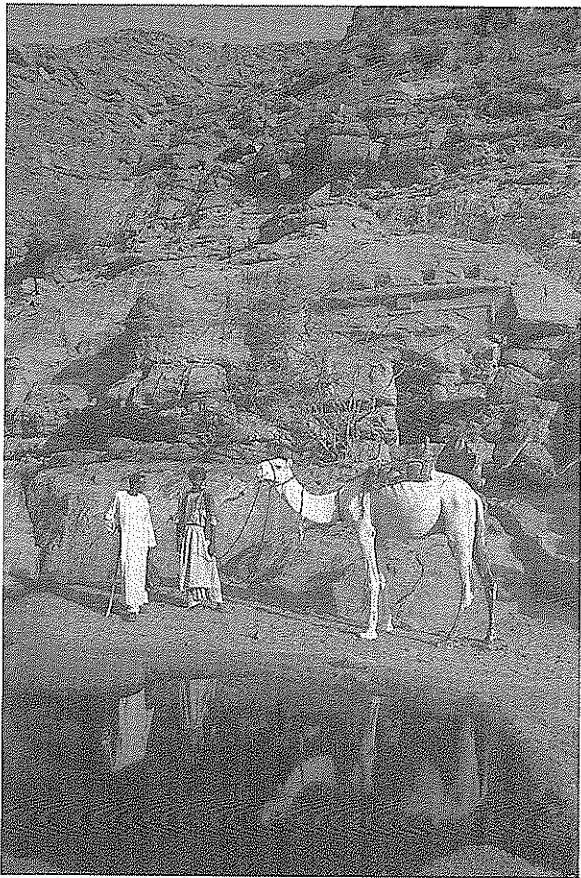


Fig. 7. View of pool and façade of "temple" at Bir Abu Safa, looking north. Photo by S. E. Sidebotham.

later route joining Edfu/Apollinopolis Magna to Berenike on the Red Sea<sup>21</sup> and also on the road linking the Red Sea port of Marsa Nakari to Edfu).<sup>22</sup> Inscriptions in the Seti temple record construction of the temple, a water station, a settlement and the excavation of a well,<sup>23</sup> but the water did not, apparently, flow from directly beneath the rupestral temple itself.

There are parallels for monumentalizing water supplies elsewhere in North Africa in the Roman province of Africa Proconsularis (modern Tunisia). Those at Zaghouan and Ain Djoukar,<sup>24</sup> two of the sources for the aqueduct that supplied water to Carthage, parallel somewhat the Bir Abu Safa façade in function though not in appearance. There are similar architectural enhancements of water sources at Khemissa and at Henchir Tamesmida, also in Africa Proconsularis.<sup>25</sup>

There are also examples of the Nabataeans and Romans monumentalizing water sources in the Near East. In several instances this practice seems to have been simply utilitarian enhancement that improved the purity and integrity of the water supply and facilitated access to it; in other instances it also added more decorative and dedicative aspects, as does the façade at Bir Abu Safa. One, which appears to be late Roman or Byzantine in date and an example simply of architectural

<sup>20</sup> Synopsis in H. Nouwens, S. Sidebotham and M. Hense, "Smaragden uit Sikait," *Archeologie Magazine* 11,5 (October/November 2003), pp. 40–46; B. C. Foster, J.-L. Rivard, S. E. Sidebotham and H. Cuvigny, "Survey of the Emerald Mines at Wadi Sikait," in S. E. Sidebotham and W. Z. Wendrich, eds., *Berenike 1999–2000. Report of the 1999–2000 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert, including Excavations in Wadi Kalalat and at Sihet* (Los Angeles), forthcoming; S. E. Sidebotham, H. M. Nouwens, A. M. Hense and J. A. Harrell, "Preliminary Report on Archaeological Fieldwork at Sikait (Eastern Desert of Egypt), and Environs 2002–2003," *Sahara* 15 (2004), pp. 7–30; H. M. Nouwens, S. E. Sidebotham and A. M. Hense, "Unieke vondsten in oostelijke Egyptische woestijn Sikait: een bijzondere stad," *Ex Oriente Lux* 21 (October 2004), pp. 8–11.

<sup>21</sup> Much has been published on this route. For the latest see S. E. Sidebotham and R. E. Zitterkopf, "Routes through the Eastern Desert of Egypt," *Expedition* 37,2 (1995), pp. 39–52; S. E. Sidebotham and R. E. Zitterkopf, "Survey of the Hinterland," in S. E. Sidebotham and W. Z. Wendrich, eds., *Berenike 1995 Preliminary Report of the 1995 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert* (Leiden, 1996), pp. 357–71; S. E. Sidebotham, "From Berenike to Koptos: Recent Results of the Desert Route Survey," *Topoi* 10,3 (2002), pp. 415–38.

<sup>22</sup> R. S. Bagnall et al., "A Ptolemaic Inscription from Bir 'Iayyan," *Cd'E* 71, 142 (1996), pp. 317–30; S. E. Sidebotham, "Caravans Across the Eastern Desert of Egypt: Recent Discoveries on the Berenike-Apollinopolis Magna-Coptos Roads," in A. Avanzini, ed., *I Profumi d' Arabia Atti del Convegno (Saggi di Storia antica 11)* (Rome, 1997), pp. 388–90; S. E. Sidebotham, "Survey of the Hinterland," in S. E. Sidebotham and W. Z. Wendrich, eds., *Berenike 1997. Report of the 1997 Excavations at Berenike and the Survey of the Egyptian Eastern Desert, including Excavations at Shenshef* (Leiden, 1999), pp. 364–68.

<sup>23</sup> J. H. Breasted, *Ancient Records of Egypt*, Volume 3, *The Nineteenth Dynasty* (Urbana-Chicago: University of Illinois Press, 2001), pp. 78–87.

<sup>24</sup> F. Rakob, "Le sanctuaire des eaux à Zaghouan," *Africa* 3–4 (1969–1970), pp. 133–41; F. Rakob, "Das römische Quellheiligtum bei Zaghouan in Tunisien," *AA* 3 (1969), pp. 284–300.

<sup>25</sup> Rakob, *Africa* (n. 24 above), p. 140; F. Glaser, "Fountains and Nymphaea," in O. Wikander, ed., *Handbook of Ancient Water Technology* (Leiden-Boston-Cologne, 2000), p. 451.

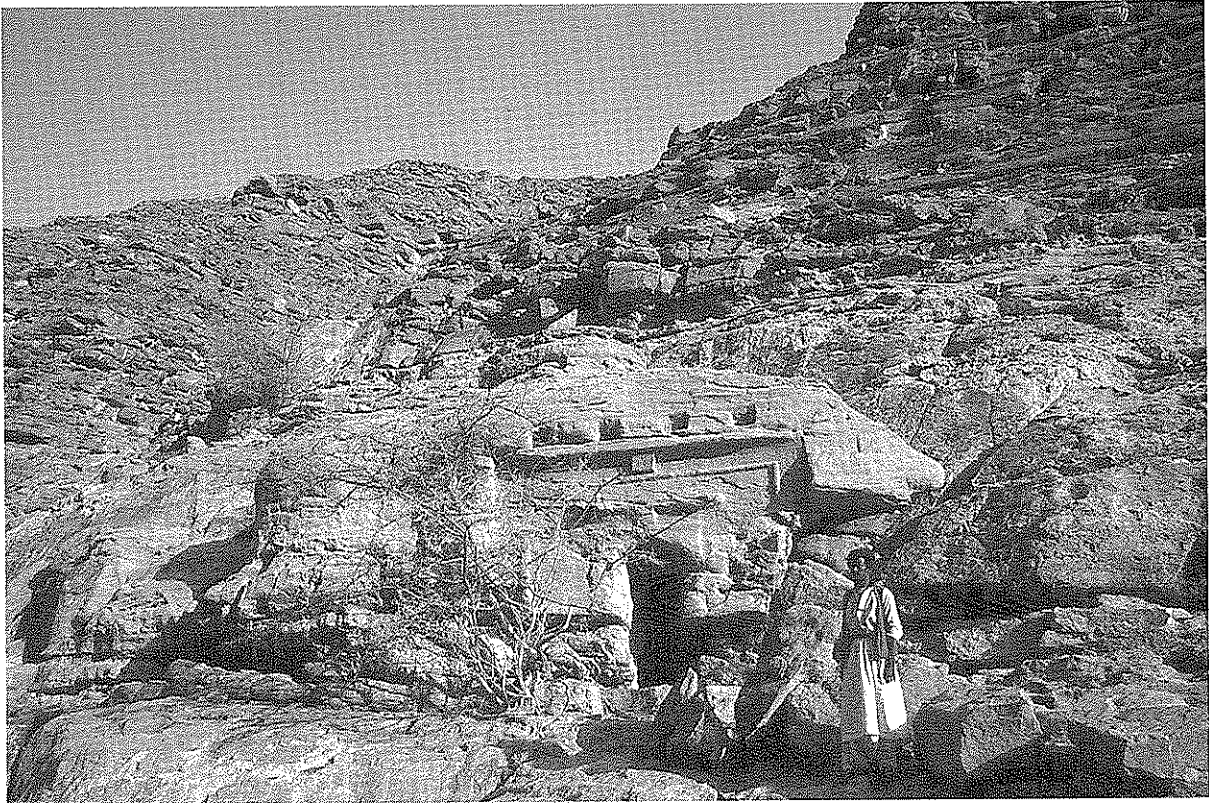


Fig. 8. View of façade of "temple" at Bir Abu Safa, looking northwest. Photo by S. E. Sidebotham.

decoration, can be found at Jericho.<sup>26</sup> Others, Nabataean in origin and also dedicatory in nature, are at Khirbet et-Tannour and Khirbet ed-Derih,<sup>27</sup> and at the sanctuary of Allat at Iram (Wadi Ram).<sup>28</sup>

While the authors are not aware of any Pharaonic structures similar in appearance and, apparently function, to the façade at Bir Abu Safa, throughout the Mediterranean there was a long "classical" Greek and Roman tradition of monumentalizing both water sources and terminal points such as *castella*, fountains, and highly decorated and ornate water displays called *nymphaea*.<sup>29</sup> The classical Greco-Roman associations of nymphs (guardian spirits of sources of pure water) with Pan are well known. That Pan, often associated with the Egyptian god Min in desert regions and whose worship is readily apparent in the numerous *Paneia* located along ancient roads in the Eastern Desert,<sup>30</sup> would have been an appropriate guardian and focal point of devotion at the Bir Abu Safa edifice would be

<sup>26</sup> P. G. Dorrell, "The Spring at Jericho from Early Photographs," *PEQ* 125 (1993), pp. 95–115. We wish to thank Prof. J. P. Oleson for this citation.

<sup>27</sup> R. Savignac, "Le Dieu nabatéen de La'aban et son temple," *RB* 46 (1937), pp. 401–16. We wish to thank Prof. D. F. Graf for this citation.

<sup>28</sup> R. Savignac, "Le Sanctuaire d'Allat à Iram," *RB* 42 (1933), pp. 405–22 and R. Savignac, "Le Sanctuaire d'Allat à Iram (suite)," *RB* 43 (1934), pp. 572–91. We wish to thank Prof. D. F. Graf for these citations.

<sup>29</sup> D. P. Crouch, *Water Management in Ancient Greek Cities* (New York-Oxford, 1993), especially pp. 283–96; S. Settis, "'Escadra' e 'ninfeo' nella terminologia architettonica del mondo romano. Dall'età repubblicana alla tarda antichità," *ANRW* 1.4 (1973), pp. 661–745; Glaser (supra n. 25), pp. 413–51.

<sup>30</sup> E.g., A. Bernand, *De Koptos à Kosseir* (Leiden, 1972), pp. 59–213 for the Paneion in Wadi Hammamat, pp. 215–50 for the Paneion at El-Boueib; A. Bernand, *Le Paneion d'El-Kanaïs: les Inscriptions grecques* (Leiden, 1972): *passim* for the Paneion at El-Kanaïs; A. Bernand, *Pan du désert* (Leiden, 1977): *passim*; F. Colin, "Les Paneia d'El-Buwayb et du Ouadi Minayh sur



Fig. 9. Detail of inscription on "temple" at Bir Abu Safa, looking northwest. Photo by S. E. Sidebotham.

a reasonable conjecture. Pan not only had the classical Greco-Roman affiliations with water, but Min had earlier been identified with the pharaoh himself. Pan/Min also bore a variety of epithets including "gold-giving," "who walks in the mountains" and "of the good road."<sup>31</sup> It could have been in any one or more of these capacities that he might have been celebrated in a small shrine at Bir Abu Safa.

Bir Abu Safa's unique "water temple" obviously does not exist in isolation within the bleak and barren desert where it now stands. There must have been, as noted above, an important trans-desert route that passed nearby, or perhaps the temple was sited near a still-undiscovered mine or quarry. Clearly more fieldwork is needed in this part of the Eastern Desert before the purpose of this charming monument can be better understood.

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la piste de Bérénice à Coptos: inscriptions égyptiennes," *BIFAO* 98 (1998), pp. 89–125 plus bibliography for the *Paneaia* at El-Bouieb and Wadi Menih. In general for Min in the Ptolemaic period at the Nile termini of Eastern Desert routes (Edfu, Kom Ombo, Denderah) see J. Yoyotte, "Une épithète de Min comme explorateur des régions orientales," *Revue d'Égyptologie* 9 (1952), pp. 125–37.

<sup>31</sup> S. H. Aufrère, "Religious Perceptions of the Mine in the Eastern Desert in Ptolemaic and Roman Times," in O. E. Kaper, ed., *Life on the Fringe: Living in the Southern Egyptian Deserts during the Roman and early-Byzantine Periods. Proceedings of a Colloquium Held on the Occasion of the 25th Anniversary of the Netherlands Institute for Archaeology and Arabic Studies in Cairo 9–12 December 1996* (Leiden, 1998), pp. 5–19.